the utilization of that services in Hungary. **METHODS:** Data were derived from the nationwide administrative dataset of the National Health Insurance Fund Administration (OEP), the only health care financing agency in Hungary. The utilization of home care (nursing) services was measured by the number of service provider, number of patients and the number of visits. We analzed the year 2011. **RESULTS:** The number of home care (nursing) service providers was 333. 80.8% of them was private for-profit, while 10.9% private non-profit organization. Altogether 51,000 patients was visited by home care providers (50 patients/10,000 population). The total annual number of visits was 1,190,000 (1193 visits/10,000 population). The average health insurance reimbursement of 1 visit was 2788 Hungarian Forint (HUF) (10.0 EUR), while the average reim-bursement of 1 patient was 65,345 HUF (234.0 EUR). **CONCLUSIONS:** We found that only 0.5 % of the Hungarian population underwent home care (nursing) services in 2011. Further development of home care services should be encouraged in order to reduce unnecessary hospital care.

PHS88

THE ROLE OF GEOGRAPHICAL PROXIMITY AND SERVICE CHARACTERISTICS ON PROMPT ACCESS TO HEALTH CARE IN CHPS SETTING IN RURAL BAWJIASE OF GHANA

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OBJECTIVES: Prompt access to effective health care is a priority in the developmental agenda of Ghana yet only 20% of people who need health care have it. Several established health interventions such as home management of fever and community-based health planning and service (CHPS) are underway. However, evidence on the extent of prompt access to health care and the factors that influence these CHPS programme are woefully inadequate. The study sought to assess the role of geographical proximity and services characteristics on prompt access to health care in CHPS settings. **METHODS:** A descriptive cross sectional study was conducted in 2011 with 230 respondents within the CHPS zones of Bawjiase Sub-district, Central region of Ghana. Data were collected with structured questionnaire and analyzed using SPSS version 16 software. Logistic regression was run to access the correlation of geographical proximity and service characteristics on prompt access to health care in CHPS settings at 95% confidence interval and 5% significance level. **RESULTS:** Knowledge about CHPS programme was almost universal 99%, nonetheless, 87% of respondents accessed health care services after 24 hours, lived within a distance of 0.05-0.4 km from CHPS centers and 54% takes approximately 15-30 minutes in reaching these settings, p<0.001. Factors associated with geographical proximity in prompt access to health care were good location, easy local accessibility (door step delivery) and distance less than 5Km. Majority 96% of the respondents presumed health care services availability, immediate attention on arrival (within 24hours) at the health care facilities and quality of health care were service characteristics that influenced prompt access to health care. **CONCLUSIONS:** The study concludes that geographical proximity and service characteristics influence prompt access to quality health care in rural CHPS setting. Rolling out CHPS initiative and further study on knowledge and beliefs on access in CHPS setting could inform implementation.

PHS89

REFERRAL PATTERNS FOR PATIENTS TREATED WITH WARFARIN THROMBOPROPHYLAXIS AFTER HIP AND KNEE REPLACEMENT SURGERY

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OBJECTIVES: Identify factors associated with referral patterns for warfarin therapy management to specialized care versus routine medical care after hip or knee replacement surgery. **METHODS:** We conducted a retrospective, observational study of patients who underwent total hip or total knee replacement surgery between the 2000 and 2009 and were referred to receive either specialized care at antithrombosis clinic or routine medical care at orthopedic clinic for post-surgical anticoagulation management. A multivariate logistic regression analysis was performed to identify factors that were associated with referral to antithrombosis clinic. **RESULTS:** A total of 873 consecutive patients treated with warfarin were referred to the antithrombosis clinic (n=294) or orthopedic clinic (n=579). The majority of patients were females (68.3%) and the average age was 60±12.3 years. Hispanics (OR=4.24, 95% CI=2.38-7.57) compared to Caucasians, were more likely to be referred to antithrombosis clinic, as were Medicare patients (OR=2.03, 95% CI=1.27-3.25) compared to those with private insurance; divorced patients (OR=2.01, 95% CI=1.03-3.94) compared to those who were married; patients with >4 VTE risk factors (OR=3.06, 95% CI =1.16-8.10) compared to patients with 1 VTE risk factor; smokers (OR=4.23, 95% CI=2.44-7.33) compared to non-smokers; and patients with extended length of post-surgery hospital stay (OR=2.27, 95% CI=1.25-4.11). **CONCLUSIONS:** There were significant variations in referral patterns to specialized care versus routine care according to thrombosis risk profile and patient-related socio-demographic factors. An understanding of referral patterns to receive specialized care compared to routine medical care is important as these decisions can have an impact on the clinical outcomes, costs, and quality of care received by patients treated with anticoagulants.

PHS90

COMPARISON IN LENGTH OF HOSPITAL STAY RELATED TO THE DIAGNOSIS OF COPD PATIENTS BEFORE AND AFTER A PROGRAM OF PHARMACOTHERAPY MONITORING

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OBJECTIVES: To compare numbers of admissions and days of hospitalization related to the diagnosis in a group of Chronic obstructive pulmonary disease (COPD), before and after their status as beneficiaries of a Pharmacotherapy Monitoring (PM). **METHODS:** Descriptive study, retrospective and comparison of results for a sample of patients (N=422) a year before and one year after receiving the intervention by PM; during this period they were recorded and classified as related or unrelated to the diagnosis COPD, all hospital admissions of patients, were quantified per stay days and a vector difference between the days before and after was built. **RESULTS:** Before the intervention by PM, 24% of patients had at least one hospital admission versus a 19% after; average length of stay before and after for both cases was 13 days with standard deviations of 11 and 13 respectively. 18% of the patients reported a decrease in the length of stay days, 66% remained the same and 15% reported an increase. The differences in the sociodemographic characteristics of patients with decreases and increases in the length of stay were those belonging to the average age (79 and 73 respectively) and schooling, where 22% of patients who had increases in the length of stay achieved at least high school degree compared with 34% of those who decreased. **CONCLUSIONS:** The comparison using descriptive statistics shows that the outcomes may be the result of intervention by PM. The significance of schooling outcomes lies in that the interventions made by PM, 72% are educating the patient/caregiver, which implies that a higher educational level would reflect greater response capacity. This work is a first step in a cohort comparison study.

PHS91

INCREASED BURDEN ON PRIMARY CARE PHYSICIANS PRECEDING DIAGNOSIS OF ALZHEIMER'S DISEASE IN THE UNITED KINGDOM

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OBJECTIVES: To examine medical resource utilization patterns prior to and post Alzheimer's disease (AD) diagnosis in UK primary care. **METHODS:** Newly diagnosed patients with non-early onset AD between January 1, 2008 and December 31, 2010 were identified from the UK CPRD-GOLD database. The index date was defined as the first AD diagnosis. Eligible patients had a continuous record for the 3-year prior (index) period and 1-year post period, and were ≥65 years of age. Controls were identified by matching to AD patients on year of birth, gender, region, and Charlson co-morbidity index with a 2:1 matching ratio. Medical resource utilization was calculated over the 4-year study period at 6-monthly intervals. T-tests, chi-square tests, and Wilcoxon sum-rank tests (depending on the data type and distribution) were used comparing between AD and control. **RESULTS:** Cohorts of 3896 AD patients and 7792 controls were extracted. At index date, patients had a mean age (SD) of 79.8 (6.5) years and 65% were female. The mean primary care consultation rate per 6-month was higher in the AD cohort than the control cohort over the total study period (p<0.05) and showed a gradual increase in the controls over the 4 years (from 5-7 consultations), while the AD cohort showed a clear increase in the 6-months prior to the index (10 consultations) and stayed at this high rate over the 1-year post-diagnosis period. The proportion of patients with a secondary care referral was higher within the AD cohort than the control cohort (37% vs. 25% over the 4-year period, p<0.05), with the difference peaking in the 6-month prior to AD diagnosis (17% vs. 5%, p<0.05). **CONCLUSIONS:** A clear increase in primary care consultations in the 6-month period prior to AD diagnosis and its continuation in the year post-diagnosis suggest AD imposes a substantial burden on UK primary care.

PHS92

VULVAR CANCER-RELATED HOSPITALIZATIONS IN THE UNITED STATES: A RETROSPECTIVE POPULATION-BASED CASE-CONTROL STUDY

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OBJECTIVES: The objective of this study was to determine the inpatient burden among women diagnosed with vulvar cancer using the 2009 Health care Utilization Project Nationwide Inpatient Sample (HCUP-NIS) database. **METHODS:** A retrospective, cross-sectional study design was used. Inpatient burden among women with vulvar cancer (cases) was compared to those without vulvar cancer (controls). Further, factors predicting average length of stay (LOS), total charges, and mortality among cases were determined. Analyses (PROC SURVEY procedures) were performed using SAS ver.9.2. **RESULTS:** In 2009, there were 6,318 hospitalizations among women with vulvar cancer in the US. The overall rate of vulvar cancer-related hospitalizations was 31.89/100,000. The average total hospital charges, comorbidity scores, and number of procedures recorded were higher among cases versus controls. Average LOS was significantly longer among cases discharged to other health facilities as compared to cases that were routinely discharged. Greater number of diagnoses and procedures recorded were associated with longer LOS. An increase in the number of procedures recorded and longer LOS were associated with higher total charges. Inpatient mortality was higher among women of lower income and those admitted to rural hospitals. Mortality among women with vulvar cancer also increased with LOS and number of diagnoses on record. **CONCLUSIONS:** To the best of our knowledge, this is the first study to use a nationally representative database to provide information related to inpatient burden among women with vulvar cancer. Policy makers could use study results when making resource allocation

decisions, with the aim of improving inpatient outcomes among women with vulvar cancer.

PHS93

PATTERNS OF CARE, COSTS AND OUTCOMES OF CHEST PAIN PATIENTS WITHIN TWO YEARS OF INITIAL VISITS TO THE ER

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OBJECTIVES: To describe the pattern of care, costs, and outcomes of chest pain patients at two years after an initial ER visit using large longitudinal claim database. **METHODS:** This was a retrospective cross-sectional study using BlueCross BlueShield of Texas claims data of patients with unspecific chest pain (from 2008 to 2011). Only patients who have had three years of continuous enrollment with six months prior to their initial visits to the ER and at least two years of follow-up after the ER visit were included. Patients were categorized into four groups; group1 included patients who were sent home after their ER visit, group2 included patients who were admitted into observation units, group3 included patients who were admitted into inpatient care and group4 included patients who were transferred into observation units and then inpatient care. The measured outcomes included myocardial infarction (MI), invasive cardiac procedures and associated costs of circulatory diseases subsequent to the emergency room visits up to two years of follow-up. **RESULTS:** A total of 172,627 met the inclusion criteria. Of those, 23.30% enrollees (40,219) had ER visits. Group1 included 28.1% of the total patients, group2 included 66.77%, group3 included 1.13% and group4 included 4.04%. The highest percentage of PTCA and CABG procedures were observed in group3 (13%, 11.7%) followed by group4 (7.9%, 1.7%), group1 (4.7%, 1.4%) and group2 (4.2%, 0.99%). The highest percentage of MI were observed in group3 (21.9%) followed by group4 (5.7%), group2 (4, 4.1%) and group1(3.3%). Group3 had also the highest cost associated with circulatory diseases with a median of ($12,084) followed by group4 ($1,496), group1($1,154) and group2 ($915). **CONCLUSIONS:** Based on the preliminary descriptive statistics, patients admitted to observation units, in our population, had the lowest percentage of cardiac invasive procedures and circulatory diseases associated costs at two years of follow-up after an initial ER visit with chest pain.

PHS94

IMPACT OF ADVERSE DRUG EVENTS ON HOSPITAL LENGTH OF STAY AND HOSPITALIZATION COSTS IN HOSPITALS FOR 2003-2009 IN THE UNITED STATES

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OBJECTIVES: To assess the effects of adverse drug events (ADEs) as the reason for admission on hospital length of stay (LOS) and hospitalization costs in US hospitals. **METHODS:** The study used the Nationwide Inpatient Sample of the Healthcare Cost and Utilization Project for 2003-2009. ADEs were defined as drug poisoning due to inappropriate medication uses or errors and adverse effects from drugs administered. A case-control matching method was used to determine LOS and hospitalization costs attributable to ADEs. For each case patient, one control patient was matched based on sex, age(±5 years), race, exact diagnosis, same hospital and same calendar year of discharge. LOS and hospitalization costs attributable to ADEs were estimated using the recycled prediction method. This method predicted outcomes for patients with ADEs by calculating outcomes using estimated coefficients from all sample using generalized linear model after adjusting for the study variables. Then, LOS and hospitalization costs attributable to ADEs were defined as the differences between the predicted outcomes assuming the patients with ADEs as having ADEs and the predicted outcomes assuming the patients with ADEs not having ADEs. All costs were converted to 2011 US dollars using consumer's price indices and calculated per-discharge. **RESULTS:** A total of 6076 patients with ADEs were matched with control patients. The matched control patients had a mean LOS of 4.50 days versus 4.85 ($p<0.05$) for patients with ADEs. The average hospitalization cost for control patients was $7648 compared to $7785 for patients with ADEs. The LOS attributable to ADEs was 0.36 days per admission and the mean hos-pitalization cost attributable to ADEs was $550 per admission. **CONCLUSIONS:** The incidence of ADE significantly increases LOS and hospitalization costs. To reduce these outcomes, it is necessary that a systematic approach to improve drug use process is undertaken including the monitoring of ADEs as an important outcome of pharmacotherapy.

PHS95

INCREMENTAL HEALTH CARE RESOURCE UTILIZATION ASSOCIATED WITH AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE

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OBJECTIVES: Incremental health care resource utilization associated with autosomal dominant polycystic kidney disease (PKD) was estimated. **METHODS:** Study data were from a large administrative claims and enrollment database. Individuals 18 y/o or older, enrolled in tracked health plans for 12 months from April 1, 2011 through March 31, 2012, and with an ICD-9-CM diagnosis code for "polycystic kidney, autosomal dominant" (753.13) or for "polycystic kidney, unspecified type (753.12) were identified as having autosomal dominant PKD. A comparison group of individuals who met all inclusion criteria except were not classified as having autosomal dominant PKD, autosomal recessive PKD, cystic kidney disease, chronic kidney disease stage 3 or higher, nephrotic syndrome, diabetic kidney disease or kidney stones associated with cystic kidney disease was matched one-to-one with individuals with PKD on age and gender. Zero-inflated negative binomial models estimated associations between PKD and hospitalizations, hospital days, nursing home stays, nursing home days, inpatient psychiatric hospital stays, inpatient psychiatric hospital days, emergency room visits and outpatient visits, after adjusting for age, gender, Charlson comorbidity index, cardiovascular disease, diabetes and geographical region. **RESULTS:** A total of 3844 individuals with PKD, satisfied selection criteria and were matched with 3844 individuals without PKD. The sample was 53% female and 55% were between 45 to 64 years old. The PKD group was more likely to have cardiovascular disease (25.6% vs. 13.3%, $p<0.001$), diabetes (14.1% vs. 10.0%, $p<0.001$) and Charlson comorbidity index scores greater than zero (55.8% versus 37.5%, $p<0.001$). Autosomal dominant PKD was associated with marginally more, mean (standard error), hospitalizations 0.09 (0.01), $p<0.001$, hospital days 0.68 (0.08), $p<0.001$, emergency room encounters 0.29 (0.06), $p<0.001$ and outpatient encounters 6.9 (0.28), $p<0.001$. **CONCLUSIONS:** Autosomal dominant PKD was associated with incrementally greater health care resource utilization especially for outpatient encounters.

PHS96

HEALTH CARE USE AND EXPENDITURES IN DIABETES PATIENTS WITH CANCER

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OBJECTIVES: To investigate the prevalence of cancer comorbidity in individuals with diabetes, and its association with health care use and expenditures. **METHODS:** Our study was conducted with a quasi-experimental design approach. Subjects included patients who reported having diabetes from the 2010 Medical Expenditure Panel Survey (MEPS). The propensity scores technique was utilized to match patients with cancer versus without cancer to reduce selection bias in observable risk factors such as age, sex, race/ethnicity, physical activity, smoking and body mass index. Further, a series of weighted inferential statistics were used to test the effect of cancer comorbidity on the variables associated with health care use and expenditures. All analyses were accomplished by taking into consideration with MEPS sample clustering, stratification, and weight adjustments using SAS 9.22 analytical software. **RESULTS:** There were an estimated 21.03 million non-institutionalized adults who reported having diabetes in the US in 2010, of which, 3.89 million (18.5%) had cancer comorbidity. Individuals with diabetes were twice as likely as a comparable sample from the general US population to be diagnosed with cancer (odds ratio 2.1, 95% CI 1.9–2.49). Variables associated with health care use and expenditures (total office-based use and expenditures, outpatient department use and expenditures, emergency facility use and expenditures, prescription medication use and expenditures, etc.) for individuals with cancer were significantly higher than those without cancer ($p< 0.0001$). **CONCLUSIONS:** Our study findings indicate the cancer individuals with diabetes are associated with increased health care use and expenditures. The major implementation may be benefit from early identifying selected diabetes patients because they seem to be at higher risk for cancer.

PHS97

WITHDRAWN